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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,777	12/16/2003	William Wilber	A8619	4090
23373	7590	02/09/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			HAM, SEUNGSOOK	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/735,777

Applicant(s)

WILBER ET AL.

Examiner

Seungsook Ham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/16/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Specification***

The disclosure is objected to because of the following informalities:

Page 3, paragraph [20], Fig. 12" should be corrected to –Figs. 12a and 12b.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-6, 8, 9, 11-13, 15, 16, 18-21, 23-25, and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Furuta et al. (EP '807).

Furuta et al. (fig. 14) discloses a resonator filter assembly comprising: a first triple-mode mono-block resonator 1; a second triple-mode mono-block resonator 1; at

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least one block resonator 41 coupled to at least one of the first triple-mode mono-block resonator and the second triple-mode mono-block resonator.

Regarding claims 3, 9, 15, 21 and 27, Furuta et al. also discloses the at least one block resonator comprises a metallic coaxial resonator (i.e., TEM resonator, col. 12, lines 43-46).

Regarding claims 4 and 16, Furuta et al. also teaches the first and second triple-mode mono-block resonators are made of ceramic (i.e., BaO-TiO<sub>2</sub> material, col. 13, lines 53-55).

Regarding claims 5 and 19, Furuta et al. shows the at least one block resonator 41 (on the right side) is coupled to only one of the first triple-mode mono-block 1 (on the right side) resonator and the second triple-mode mono-block resonator.

Regarding claims 8, 11, 20, 23 and 29, Furuta et al. also shows the at last one block resonator comprises first and second resonators 41 (the resonators 41 at the both ends of the filter 3); and the first resonator is coupled to the first triple-mode mono-block resonator, and the second resonator is coupled to the second triple-mode mono-block resonator, and the first and second triple-mode mono-block resonators are coupled to one another (see fig. 14).

Regarding claims 6, 12, 18, 24 and 28, Furuta et al. (fig. 14) also shows the at least one block resonator coupled to the at least one of first triple-mode mono-block resonator and the second triple-mode mono-block resonator by an aperture/partition 5. It should be noted that the partition 5 contains a spacing/aperture in order to couple between the resonators (see also figures 24a, 24b).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 10, 14, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuta et al. (EP '807).

Furuta et al. does not show the at least one block resonator (first and second resonator) disposed between the first and second triple-mode mono-block resonators. However, such arrangement is considered as obvious modification in order to obtain a desired filter characteristic since Furuta et al. teaches that arbitrary numbers of resonators/filter can be composed with triple mode resonators (col. 12, line 55 – col. 13, line 6).

Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuta et al. (EP '807) in view of Tikhov et al. ("A Novel Surface Mount Filter Based on a Triple-Mode Ceramic Cavity").

Furuta et al. does not show that the first and second triple-mode mono-block resonators are a metal plated dielectric block. However, it is well known in the art to cover a dielectric block resonator with a metal to form a dielectric waveguide resonator.

Tikhov et al. (fig. 1) discloses a conventional metal plated triple-mode mono-block resonator.

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It would have been obvious to one of ordinary skill in the art to use the metal plated triple-mode mono-block resonator of Tikhov et al. as the first and second triple-mode mono-block resonators in the device of Furuta et al. to form a waveguide filter assembly since the triple-mode mono-block resonators of Furuta et al and Tikhov et al. are functionally equivalent.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sano et al. (US '106) discloses metal plated dielectric waveguide filter;

Andoh et al. (US '979) discloses a triple-mode dielectric filter with aperture couplings; and

Ando et al. (US Pat. Appl. Pub. '103), Duong et al. (US '175) and Matsuura et al. (US Pat. Appl. Pub. 244) disclose a hybrid filter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seungsook Ham  
Primary Examiner  
Art Unit 2817

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